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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,140	02/09/2006	Matthew J. Dillon	CE10039EP	6153
22917	7590	09/03/2008	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			PHAM, TUAN	
			ART UNIT	PAPER NUMBER
			2618	
			NOTIFICATION DATE	DELIVERY MODE
			09/03/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/568,140	<b>Applicant(s)</b> DILLON, MATTHEW J.	
	<b>Examiner</b> TUAN A. PHAM	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8,12-20 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,12-20 and 22-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Introduction***

1. This is a response to the Applicant's filing on 02/09/2006. In virtue of this filing, claims 1-5, 7-8, 12-20, and 22-25 are currently presented in the instant application.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on 02/09/2006 has been considered by Examiner and made of record in the application file.

### ***Drawings***

4. The drawing submitted on 02/09/2006 has been considered by Examiner and made of record in the application file.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 14, 19-20, and 22-25 rejected under 35 U.S.C. 103(a) as being unpatentable over McGowan et al. (Patent No.: US 7,127,267, hereinafter, "McGowan") in view of Lehtinen et al. (Pub. No.: US 2003/0224813, hereinafter, "Lehtinen").**

**Regarding claims 1 and 25**, McGowan teaches a method and an apparatus for a radio communication system comprising (see figure 3):

means for receiving an access message transmitted from a subscriber unit to a base station (see col.3, ln.5-40, col.4, ln.44-67);

means for receiving a measured signal to interference ratio of a signal of the base station data from the subscriber unit (see col.3, ln.5-40, col.4, ln.44-67); and

means for determining a resource requirement for achieving a desired signal to interference ratio in response to the interference characteristic (see col.3, ln.5-40, col.4, ln.44-67).

It should be noticed that McGowan teach means for determining an interference characteristic associated with the subscriber unit in response to the measured signal to interference ratio and a known transmitted signal to interference ratio of the base

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station. However, Lehtinen teaches means for determining an interference characteristic associated with the subscriber unit in response to the measured signal to interference ratio and a known transmitted signal to interference ratio of the base station (read on average SIR)(see [0074]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Lehtinen into view of McGowan in order to improve the changing power requirement as suggested by Lehtinen at [0009].

**Regarding claim 14**, McGowan further teaches the means for determining the interference characteristic is operable to determine an interference bias associated with the subscriber unit and to determine the interference characteristic in response to the bias (see col.3, ln.5-40, col.4, ln.44-67).

**Regarding claim 19**, McGowan further teaches the means for determining the resource requirement is further operable to determine the resource requirement in response to a noise level (see col.3, ln.5-40, col.4, ln.44-67, it is clearly seen that the BSC response to interference).

**Regarding claim 20**, McGowan further teaches the resource requirement is a power requirement (see col.3, ln.5-40, col.4, ln.44-67).

**Regarding claim 22**, McGowan further teaches means for determining if the resource requirement is less than an available resource of the base station and for admitting access of the subscriber unit only if the resource requirement is less than the

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available resource (see col.3, ln.5-40, col.4, ln.44-67, it is clearly seen that the BSC compare interference with threshold).

**Regarding claim 23**, McGowan further teaches the resource requirement is associated with a downlink resource of the base station (see col.3, ln.5-40, col.4, ln.44-67).

**Regarding claim 24**, McGowan further teaches CDMA system (see col.4, ln.28-30).

7. **Claims 2-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGowan et al. (Patent No.: US 7,127,267, hereinafter, "McGowan") in view of Lehtinen et al. (Pub. No.: US 2003/0224813, hereinafter, "Lehtinen") as applied to claim 1 above, and further in view of Hamalainen et al. (Patent No.: 6,701,130, hereinafter, "Hamalainen").**

**Regarding claim 2**, McGowan and Lehtinen, in combination, fails to teach the means for determining the interference characteristic is operable to determine a distance characteristic indicative of a distance between the subscriber unit and the base station and to determine the interference characteristic in response to the distance characteristic. However, Hamalainen teaches the means for determining the interference characteristic is operable to determine a distance characteristic indicative of a distance between the subscriber unit and the base station and to determine the interference characteristic in response to the distance characteristic (see col.7, ln.29-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hamalainen into view of MvGowan and Lehtinen in order to reduce the interference in the cellular system.

**Regarding claim 3**, Hamalainen further teaches the means for determining the interference characteristic is operable to determine the distance characteristic in response to a propagation delay associated with a communication between the subscriber unit and the base station (see col.5, ln.55-60, col.7, ln.29-44).

**Regarding claim 4**, Hamalainen further teaches the distance characteristic comprises a ratio between an estimated distance between the subscriber unit and the base station and a cell radius associated with the base station (see col.7, ln.29-44).

**Regarding claim 5**, Hamalainen further teaches the means for determining the interference characteristic is operable to determine the interference characteristic in response to a predetermined variation of the interference characteristic as a function of the distance characteristic (see col.7, ln.29-44).

**Regarding claim 7**, Hamalainen further teaches the means for determining the interference characteristic is operable to determine the interference characteristic in response to empirical data indicating an association between the interference characteristic and the distance characteristic (see col.7, ln.29-44).

**Regarding claim 8**, Hamalainen further teaches the means for determining the interference characteristic is operable to determine the interference characteristic in response to simulation data indicating an association between the interference characteristic and the distance characteristic (see col.7, ln.29-44).

**8. Claims 12-13 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGowan et al. (Patent No.: US 7,127,267, hereinafter, "McGowan") in view of Lehtinen et al. (Pub. No.: US 2003/0224813, hereinafter, "Lehtinen") as applied to claim 1 above, and further in view of Palenius Pub. No.: US 2003/0096618).**

**Regarding claim 12,** McGowan and Lehtinen, in combination, fails to teach the interference characteristic comprises an intra-cell interference ratio and the means for determining the interference characteristic is operable to compensate for an inter-cell interference component of the measured signal to interference ratio. However, Palenius teaches the interference characteristic comprises an intra-cell interference ratio and the means for determining the interference characteristic is operable to compensate for an inter-cell interference component of the measured signal to interference ratio (see [0031]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Palenius into view of McGowan and Lehtinen in order to provide the fast measurement downlink channel as suggested by Palenius at col.2, ln.1-17.

**Regarding claim 13,** after combine, McGowan teaches the signal measurement data comprises measured signal to interference ratios associated with the base station and a plurality neighboring base stations and the means for determining the interference characteristic is operable to determine the interference (see col.3, ln.5-40). Palenius teaches an inter-cell interference measure in response to the measured signal to



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interference ratios associated with the base station and the plurality neighboring base stations (see [0031]).

**Regarding claims 15 and 17-18**, Palenius further teaches an inter-cell interference orthogonality factor (see [0031]).

**Regarding claim 16**, after combine, Hamalainen teaches the means for determining the interference characteristic is operable in response to a path loss estimate of a radio communication link between the subscriber unit and the base station and path loss estimates of radio communication links between the subscriber unit and a plurality neighbor base stations (see claim 5). Palenius teaches to determine the inter-cell interference factor (see [0031]).

### **Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Pham whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have question on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/TUAN A PHAM/  
Examiner, Art Unit 2618